Final Draft of Technical Information for the Quality Measures included in the Nursing Home Quality Initiative
October 22, 2002

Technical information about the infection quality measure.

The Minimum Data Set (MDS) is a set of data collection tools used by nursing homes to assess their residents. Nursing home residents should get a full assessment annually, and briefer assessments quarterly (every 3 months). For quarterly assessments, States have the option to use one of four forms. Three of these forms collect data on multiple infections (pneumonia, respiratory infections, septicemia, wound infections, hepatitis, and urinary tract infections), which are all used to calculate the quality measure. However the fourth form (called a "2-page quarterly") collects quarterly data on urinary tract infections (UTIs) only. For the states that use this "2-page quarterly" form, the measure is mostly a "UTI measure", but also includes data on those other infections from the resident's most recent annual assessment. Because of this, this measure is useful in comparing facilities within one state or with other states that use similar forms. Comparing two facilities in two different states that use different forms will not provide an accurate comparison for this quality measure and this is why we do not provide a "national" average for this quality measure.

Technical information about the physical restraint quality measure.

Older people can suffer from diseases of the brain, which causes them at times to behave in abnormal ways. Some residents of nursing homes have very abnormal or disturbing behavior such as hitting, spitting, wandering, or falling down frequently. In the past, the staff of the nursing home sometimes used physical restraints to prevent the resident from injuring themselves or other people, to keep them in bed, or to prevent them from falling. Current research in nursing homes has shown that in many cases, a careful assessment of the resident's behavior and risk factors can show the nursing home team ways to try to keep the resident safe without using physical restraints. Alternates to restraints are important to maintain the resident's strength and to ensure as much independence as possible. This type of treatment is not easy, and sometimes requires special training. Sometimes, even with the most advanced training and the best attempts to avoid using restraints, some use of physical restraints might be unavoidable. However, the use of the restraint must be strictly limited to those cases in which it is required to treat the resident's medical symptoms and it must be ordered by a physician. Other treatments must eventually be found so that the resident can be comfortable and safe without the need for physical restraints every day.

Federal regulations state that a nursing home resident has the right to be free from any physical or chemical restraints imposed for the purposes of discipline or convenience and not required to treat the resident's medical symptoms. Many scientific studies show that the use of restraints in nursing homes is no longer necessary with today's ability to diagnose and treat residents. While it is unlikely that the use of physical restraints in nursing homes will completely stop, CMS believes the percentage of residents in physical restraints can be significantly reduced with education and training of nursing home physicians and staff as well as residents and their families. Many nursing homes around

the country have already accomplished this. We are committed to help all nursing homes achieve this goal.

Note: While bed rails, when used as a restraint, are not included in the calculation of this quality measure, CMS continues to identify them as a restraint. According to the MDS manual, physical restraints are defined as any manual method or physical or mechanical device, material, or equipment attached or adjacent to the resident's body that the individual cannot remove easily which restricts freedom of movement or normal access to one's body. **Full Bed Rails** may be one or more rails along both sides of the resident's bed that block three-quarters to the whole length of the mattress from top to bottom. This definition also includes beds with one side placed against the wall (prohibiting the resident from entering and exiting on that side) and the other side blocked by a full bed rail. Included in this category are "veil" screens (used in pediatric units) and enclosed bed systems.

Technical information about the pain quality measure.

Pain can be hard to assess and report, but this is very important to the resident's quality of life. The pain quality measure only identifies residents with pain or suspected to have pain; it does not identify efforts to control the pain. You should use this information when you visit the nursing home. It can be used as a starting point to ask questions about the care given by the nursing home to find and treat pain.

When talking broadly, a higher percentage on this quality measure is worse and a lower percentage is better. However, when comparing "Nursing Home A" and "Nursing Home B," this may not be true. Here are two examples of why this may happen:

- Imagine two nursing homes with exactly the same residents and quality of care except for on difference. "Nursing Home A's" staff does an excellent job of checking the residents for pain and "Nursing Home B's" staff does an average job of checking their residents for pain. "Nursing Home A" will have a slightly higher percentage on this quality measure, but is not providing poorer care.
- Imagine two other nursing homes, who also provide identical care and have identical residents except for one feature. "Nursing Home C" has many residents, who for personal or cultural reasons refuse pain medication. "Nursing Home D" does not. "Nursing Home C" will have a slightly higher percentage than "Nursing Home D," but is not providing poorer care.

Resident Choice

It is important to know that the resident can refuse to accept pain-control efforts. Some reasons that a resident would refuse pain medication could be that they might be concerned about the possibility of dependency on a particular drug, they don't want to feel groggy, or they don't like to take medicine. In this situation, nursing homes look for ways to treat or lessen pain without the use of medications.

Cognitively Impaired Residents (For example: Residents who have Alzheimer's Disease.)

Some nursing home residents may be cognitively impaired and are unable to verbalize their pain. With this in mind, it is always a concern that cognitively impaired residents may not be included in the data. This quality measure uses a resident level risk adjustment to allow the cognitively impaired resident to be fairly represented in the data.

Long-term vs. Short stay

In general, the short-stay populations are likely to report higher percentages of pain because of the types of medical conditions they have. Usually, short-stay patients have injuries or conditions like broken bones or recent surgeries that require short term, aggressive rehabilitation. These conditions usually cause moderate levels of pain or discomfort that should be identified and treated. Aggressive physical rehabilitation itself is also sometimes associated with a certain level of pain that may be unavoidable as the resident works to recover maximum function. Finally, the rates of pain in the short stay resident may appear to be higher than they actually are due to the more frequent assessments over a shorter period of time.

MDS coding (For Facility Personnel)

MDS 2.0 only captures pain symptoms. The MDS 2.0 does not capture pain management/pain intervention data (except by proxy in some residents, i.e., by capturing the pain became less severe with time or the decreasing frequency). Such documentation would be found elsewhere on the resident's record in the nurses' notes, progress notes, medication records, and care plan.

CMS anticipates that few residents on pain management measures will not have some level of breakthrough pain during the 7-day assessment period that should then be coded on the MDS. For example, if through assessment or clinical record review you note that the resident has received pain medications or other pain relief measures, investigate the pain need and capture the pain event on the MDS. However, if the resident does not experience ANY breakthrough pain in the 7-day assessment window, they would indeed code 0. Remember that the assessment covers a 7-day period and should reflect the highest level of pain recorded by any staff member, not just the assessment of the professional completing the MDS.

Technical information about the pressure sore quality measure.

Pressure sores are also called decubitus ulcers or bed sores. These sores or open areas on the skin are classified into four stages according to severity. This ranges from mild discoloration of the skin, which disappears within a few hours after pressure is relieved on the area to a very deep wound extending to and sometimes through internal organs and

into bone. This measure includes all pressure sores, regardless of their severity. When you are unable to move on your own, or are very ill or weak, a pressure sore can develop as quickly as within eight hours.

Pressure sores are recorded on the resident assessment and classified by their stage, or severity. Current guidance for completing the assessment instructs facilities to continue to "stage" pressure sores in reverse as they heal. Severe pressure ulcers may take a long time to heal. As a result, some of the pressure sores captured by this measure may be ones that the facility is in the process of successfully treating and improving.

Pressure sores are usually caused by pressure, but can also occur because of the friction caused by rubbing against an object like a wheelchair, clothing, or bed linens. Pressure sores are the most likely to form on areas of tissue lying just over bones such as the spine, tailbone, hips, heels, and elbows. The weight of the person's body presses on the bone, the bone presses on the skin and tissue that covers it, and the tissue is trapped between the bone structure and bed or wheelchair surface. This compresses the blood vessels in the skin and underlying tissues. Blood circulation is lessened in the tissue and it begins to break down.

Known factors that put a person at higher risk of developing a pressure sore include poor nutrition, poor hygiene, incontinence, dehydration, a previous history of a pressure ulcer, and a lack of movement. Pressure ulcer development can be greatly reduced, in many cases, by frequent turning and appropriate padding even in terminal situations where a patient is not receiving nutrition and hydration. For some residents, however, the development of pressure ulcers may be unavoidable despite excellent care. Patient directed care allows alert, competent residents the right to refuse medications, food, fluids and treatments such as turning. Patient refusal of nutrition and positioning may also contribute to the development of pressure sores.

Additional information is available on the **Agency for Healthcare Research and Quality** website.

Technical information about the delirium quality measure.

The three most important things to understand about delirium are:

1. Delirium is a manifestation of illness, but it is not a disease itself (a good analogy is with pain - pain is not a disease, but rather a symptom that can be caused by many different diseases).
2. There are many diseases, which may cause delirium in an older person, and often there is more than one cause present at the same time.
3. Often the cause of delirium is at least partially treatable; and so, most residents with delirium will demonstrate some improvement with proper treatment.

An important aspect of residents with delirium is that they get confused, and this confusion usually comes on very suddenly. This type of confusion also may fluctuate during the day and night. Confusion caused by delirium is different than confusion caused by dementia or Alzheimer's disease. The confusion associated with dementia usually comes on slowly, progresses gradually, and usually does not get better over long periods of time. Unfortunately, the most important risk factor for developing delirium is suffering from dementia to begin with. Both abnormal conditions (delirium and dementia) can cause confusion, but the confusion caused by delirium usually comes on faster, fluctuates more, and is more treatable than the confusion caused by dementia. One of the most common events in a confused nursing home resident is that they actually have both delirium and dementia at the same time. In that case, some confusion will remain even after good treatment of the delirium. The confusion that is left is caused by dementia. This cycle may reoccur in the future.

There are many possible causes of delirium. The three most important ones are: infection, medications, and dehydration. It is common for people at the end of their lives to experience delirium.

When an older person suddenly becomes confused or experiences a rapid increase in their confusion, delirium should be suspected, and a nurse should assess the resident as soon as possible. Further assessment by the doctor is also recommended. The purpose of the assessment will be to discover what is causing the delirium. Once the cause is determined, the proper treatment can be prescribed. For example, if the resident has pneumonia, then antibiotics can be prescribed. If a medication is causing delirium, most of the time that medication can be stopped or changed. If the resident is dehydrated, more fluids can be given by mouth, by feeding tube, or by the intravenous route. Some residents with delirium are found to be so sick that they require more intensive treatment.

Technical information about the loss of ability in basic daily tasks quality measure.

Residents who are admitted to nursing homes almost always have some problems in performing one or more of their "basic daily tasks", which are known as Activities of Daily Living (ADLs). One of the many jobs of the staff in a nursing home is to try to prevent loss in the resident's ability to function after admission, and in some cases, to actually contribute to an improvement in function. Improved function in ADLs can be achieved by encouraging independence in resident daily activities, through physical and occupational therapy, by avoiding medications with side effects such as drowsiness or confusion, and by attending promptly to any medical problems which may arise, such as infections or pain. Nursing homes should always strive, with every resident, to try to improve functional ability as much as possible.

Regardless of how much effort a nursing home program puts into improving function in their population of frail elderly residents, some residents will inevitably experience a loss

in function over time. This is especially true of very sick or very frail residents, especially near the end of their lives.

The scientists who constructed this measure were very sensitive to the fact that many nursing home residents can be expected to suffer a decline in function over time. For that reason, the risk adjustment for this measure excludes the following types of patients from measurement: those already totally dependent in all four ADLs, those in coma, those who are known to be in the end stages of many chronic diseases, and those enrolled in the hospice program (many times the end stages of cancer). The scientists also constructed the measure such that a gradual, slow decline in function (such as is seen with many patients with Alzheimer's Disease) will not cause a positive result on the measure. Only those residents observed to have relatively sudden and severe loss of function will be counted with a positive result. A sudden and severe loss of function sometimes indicates a serious medical problem, which, if treated promptly, can lead the patient to regain function to their previous level.

Still, in spite of the best possible efforts of the best possible nursing homes, some patients will still suffer sudden and severe losses of function under circumstances, which cannot be prevented. Therefore, even the best nursing homes will still have some patients for which this measure will be positive. For a Quality Improvement program in any nursing home, the goal should be to try to support programs, which will keep this number as low as possible. When you visit the nursing home, ask what programs are in place to maintain and improve the physical function of the residents.

Technical information about the improvement in walking quality measure.

The three most important characteristics of this measure are: 1) that it is an "incidence measure", meaning that it is an outcome that measures change over time, 2) that, as nearly as possible, it measures exactly the outcome that most skilled "post-acute" units were developed to achieve, and 3) it is the only measure that measures a "positive" outcome.

The main reason skilled post-acute units were developed in Nursing Homes was to provide physical therapy and occupational therapy to Medicare beneficiaries, often in the postoperative setting, who need more help with basic physical functioning before they go home. It was widely recognized that this type of care did not need to be provided in the more expensive acute care setting. We now know that this kind of rehabilitation can be provided more efficiently, and more safely, in a nursing home environment. The whole purpose of this kind of care is to help Medicare beneficiaries recover physical function, especially walking mobility, after some kind of acute setback, such as occurs after surgery or acute illness. Post-acute units deliberately look for patients with a high likelihood of rapid improvement in function with proper therapy. Achieving good results quickly on this measure justifies funding for post-acute care, and contributes to improved health, independence, and well being for Medicare beneficiaries. Although not every

post-acute patient will be able to meet this goal of increased functional independence, current measurement data suggest there is substantial room for improvement in the great majority of post-acute units.